Homework 2: Computer Exercises
Due Tuesday Feb 8
Econ 29000
Kevin R Foster, CCNY

For **Computer Exercises**, your study group should hand in a single assignment. When emailing assignments, **please include your name and the assignment number as part of the filename**. Please write the names of your study group members at the beginning of your homework.

1. What are the names of the people in your study group?
2. Use PASW/SPSS to open the ATUS dataset (refer to online notes on PASW/SPSS and ATUS). Create a new variable, time spent sleeping, that includes sleeplessness and sleep, n.e.c.; you might as well change the units to hours since that's easier to understand (i.e. divide by 60). Create histograms that show the hours of sleep of adult men and women. Explain what these show. (You may want to further examine subcategories; go ahead!)
3. Using the ATUS, create a variable, "Time Spent Working," labeled "T_work," that is the sum of T050101, T050102, T050103, T050189, T050201, T050202, T050203, T050204, T050289, T050301, T050302, T050303, T050304, T050389, T050403, T050404, T050405, T050481, T050499, T059999, and T180501. Create a scatter plot with time working on the horizontal axis and time sleeping on the vertical. Do you see any relationship? Would you expect to see one? Is there a different relationship, for men and women? Old and young? African-American, Hispanic, Asian, white? Choose any interesting pair.
4. Compute the mean and median for hours of sleep between men and women (#2 above) and then hours of work between your chosen pair in #3 above. Discuss the marginal information contributed by these estimates. Find means and medians for sub-groups, based on age (at least 18-35, 36-55, 56+; a finer grid could be more useful); how do these contribute to your understanding of the variation in the data?

Solution Strategies
Too many students stop stone-cold at the beginning of a problem, if they can't immediately see how to solve it. This violates one of the most basic strategies of finding a solution: Just Do It! (Yeah, it's also a slogan to sell something.)

You regularly use this solution strategy for things like electronic games. How do you learn to play them? Usually you just start doing it, figuring things out as you go along. You might not know how to score points (or even if the point of the game is scoring points); you will discover for yourself many things about the game. If you are serious about it then after a while, you might search online for tips or even read some help files . But the main way you will learn about it is to just do it.

So, too, for stats. The only difference is that learning a game is fun work while learning stats is hard work – but that's just laziness. (With time you might learn how fun stats is!) If you haven't

spent a few hours just trying it, then you haven't started anything.

And just like you chat with friends about a new game, so too work with your study group to figure out problems.

Asking questions
It is rarely helpful to go to the instructor or TA and just say "I can't do it." You have to explain what you've done so far, in detail, and where you've hit problems. Sometimes writing this out can even cause a "eureka!" moment when you see what you were missing. But it can at least help me or a TA understand what you're doing wrong.